

WE CLAIM:

Sub
a7 1. A method for producing preforms from fiber composite semi-finished products and polymer so as to use them as components after a curing process comprising:

alternately placing layers of cut dry fiber composite semi-finished product sections and polymer layers with a predetermined shape on top of each other to initially form a bonded fabric on a working surface,

forming individual profile parts of said bonded fabric and subsequently curing the individual profile parts to form a specified preform from the bonded fabric,

wherein the polymer layers exhibit shapes that ensure bonding of inner cut semi-finished product sections as well as of cut semi-finished product sections that form outer sides of the preform facing each other in overlapping areas, and

wherein the polymer layers contain local recesses in order to minimize shearing stress between the semi-finished product sections in areas of the local recesses when forming the individual profile parts of the bonded fabric.

2. The method for producing preforms according to claim 1, wherein the dry fiber composite semi-finished product includes at least one of tissue, a multi-axial bonded fabric, interlaced

Sub
at
7
tissue, a mat, and a unidirectional chain-reinforced semi-finished product.

3. The method for producing preforms according to claim 1, wherein placing the polymer layers includes applying at least one of the polymer layers in the form of a polymer coating together with a carrier foil onto a first overlapping area of a cut semi-finished product section, and wherein the carrier foil is removed after pressing on the polymer coating.

4. The method for producing preforms according to claim 3, wherein the polymer coating is applied to a planned overlapping area of the semi-finished product before cutting the dry fiber composite semi-finished product, and the semi-finished product section is subsequently cut.

5. The method for producing preforms according to claim 1, wherein forming the individual profile parts creates extending base layers.

6. The method for producing preforms according to claim 1, wherein the bonded fabric is placed on a working surface, and wherein forming the individual profile parts is conducted in a curing tool.

Sub
a7 7. The method for producing preforms according to claim 1,
wherein the working surface has a separating foil as a carrier
for the bonded fabric.

8. The method for producing preforms according to claim 1,
wherein the working surface contains a reference device.

9. The method for producing preforms according to claim 1,
wherein the working surface has a polymer layer in order to set
the bonded fabric during its forming process.

10. The method for producing preforms according to claim 1,
wherein the material of the polymer layers corresponds to the
polymer.

11. The method for producing preforms according to claim
1, wherein the material of the polymer layer is compatible with
the polymer.

Sub
a7 12. The method for producing preforms according to claim 1,
wherein at least one of the preforms is composed of a plurality
of pre-preforms.

5/16
A7

13. The method for producing preforms according to claim 2, wherein placing the polymer layers includes applying at least one of the polymer layers in the form of a polymer coating together with a carrier foil onto a first overlapping area of a cut semi-finished product section, and wherein the carrier foil is removed after pressing on the polymer coating.

14. The method for producing preforms according to claim 13, wherein the polymer coating is applied to a planned overlapping area of the semi-finished product before cutting the dry fiber composite semi-finished product, and the semi-finished product section is subsequently cut.

15. A preform produced from fiber composite semi-finished products and polymer for use as a component after a curing process made by a process comprising:

alternately placing layers of cut dry fiber composite semi-finished product sections and polymer layers with a predetermined shape on top of each other to initially form a bonded fabric on a working surface,

forming individual profile parts of said bonded fabric and subsequently curing the individual profile parts to form a specified preform from the bonded fabric,

wherein the polymer layers exhibit shapes that ensure bonding of inner cut semi-finished product sections as well as of cut semi-finished product sections that form outer sides of the preform facing each other in overlapping areas, and

wherein the polymer layers contain local recesses in order to minimize shearing stress between the semi-finished product sections in areas of the local recesses when forming the individual profile parts of the bonded fabric.

16. The preform according to claim 15, wherein the dry fiber composite semi-finished product includes at least one of tissue, a multi-axial bonded fabric, interlaced tissue, a mat, and a unidirectional chain-reinforced semi-finished product.

17. The preform according to claim 15, wherein placing the polymer layers includes applying at least one of the polymer layers in the form of a polymer coating together with a carrier foil onto a first overlapping area of a cut semi-finished product section, and wherein the carrier foil is removed after pressing on the polymer coating.

18. The preform according to claim 17, wherein the polymer coating is applied to a planned overlapping area of the semi-finished product before cutting the dry fiber composite semi-

finished product, and the semi-finished product section is subsequently cut.

19. The preform according to claim 15, wherein forming the individual profile parts creates extending base layers.

20. The preform according to claim 15, wherein the bonded fabric is placed on a working surface, and wherein forming the individual profile parts is conducted in a curing tool.

21. The preform according to claim 15, wherein the working surface has a separating foil as a carrier for the bonded fabric.

22. The preform according to claim 15, wherein the working surface contains a reference device.

23. The preform according to claim 15, wherein the working surface has a polymer layer in order to set the bonded fabric during its forming process.

24. The preform according to claim 15, wherein the material of the polymer layers corresponds to the polymer.

25. The preform according to claim 15, wherein the material of the polymer layer is compatible with the polymer.

26. The preform according to claim 15, wherein the preform is composed of a plurality of pre-preforms.

27. The preform according to claim 16, wherein placing the polymer layers includes applying at least one of the polymer layers in the form of a polymer coating together with a carrier foil onto a first overlapping area of a cut semi-finished product section, and wherein the carrier foil is removed after pressing on the polymer coating.

28. The preform according to claim 27, wherein the polymer coating is applied to a planned overlapping area of the semi-finished product before cutting the dry fiber composite semi-finished product, and the semi-finished product section is subsequently cut.